

That Which is Claimed is:

1. An exercise machine for exercising the triceps muscles of a user, comprising:

- 5 a frame configured to rest on an underlying surface;
- a seat mounted to the frame and configured to receive a seated user;
- a pair of support pads mounted to the frame forwardly of and above the seat, each of the support pads being positioned to engage one of the upper arms and the elbows of the seated user;
- 10 a pair of movement arm units pivotally interconnected with the frame and movable about respective generally horizontal axes of rotation, each of the pair of movement arm units being configured to engage at least one of the forearms and the hands of the user, each of the pair of movement arm units being movable between a retracted position, in which the seated user's arms are bent, and an extended position,
- 15 in which the user's arms are extended, the axes of rotation forming an angle of between about 115 and 155 degrees; and
- a resistance system connected with the movement arm units that provides resistance to rotation of the movement arm units as they move from the retracted position to the extended position.

20

2. The exercise machine defined in Claim 1, wherein the seat and frame are configured such that the elevation of the seat relative to the frame is adjustable.

3. The exercise machine defined in Claim 2, wherein the seat elevation is adjustable such that, when the user is seated and the user's upper arms or elbows engage the support pads, the user's upper arms are angled upwardly from shoulder to elbow.

4. The exercise machine defined in Claim 3, wherein the user's upper arms are angled upwardly from shoulder to elbow at an angle of at least 10 degrees.

5. The exercise machine defined in Claim 1, further comprising a backrest positioned rearwardly of and extending upwardly from the seat, the backrest

defining a plane that forms an angle of between about 75 and 95 with the underlying surface.

6. The exercise machine defined in Claim 1, wherein each of the support
5 pads is positioned so that each of the user's elbows is located on a respective axis of rotation.

7. The exercise machine defined in Claim 1, wherein the angle formed by
10 the axes of rotation is between 135 and 145 degrees.

8. The exercise machine defined in Claim 1, wherein the frame includes
15 pairs of front and rear uprights rising from respective legs, each set of respective front and rear uprights and legs defining a generally vertical plane, the generally vertical planes defining an angle of between about 20 and 70 degrees.

9. The exercise machine defined in Claim 8, wherein the generally
vertical planes define an angle of between about 35 and 45 degrees.

10. The exercise machine defined in Claim 1, wherein the resistance
20 system comprises a weight stack.

11. The exercise machine defined in Claim 9, wherein each movement arm
unit comprises a cam that pivots about its respective axis of rotation, and wherein the
resistance system includes a belt attached to and engaging each cam.

12. The exercise machine defined in Claim 11, wherein each movement
25 arm unit comprises a lever arm attached to each cam and a handle that is pivotally interconnected to the lever arm and engages one of the forearm and hand of the user, the axis of rotation of the handle relative to the lever arm being substantially parallel
30 to the axis of rotation of the cam relative to the frame.

13. An exercise machine for exercising the triceps muscles of a user,
comprising:

a frame configured to rest on an underlying surface that includes pairs of front and rear uprights rising from respective legs, each set of respective front and rear uprights and legs defining a generally vertical plane, the generally vertical planes defining an angle of between about 20 and 70 degrees;

5 a seat mounted to the frame and configured to receive a seated user;

a pair of pads mounted to the frame forwardly of the seat, each of the pads being positioned to engage the upper arms of the seated user;

a pair of movement arm units pivotally interconnected with the frame and movable about respective generally horizontal axes of rotation, each of the pair of movement arm units being configured to engage at least one of the forearms and the hands of the user, each of the pair of movement arm units being movable between a retracted position, in which the seated user's arms are bent, and an extended position, in which the user's arms are extended; and

10 a resistance system connected with the movement arm units that provides resistance to rotation of the movement arm units as they move from the retracted position to the extended position.

14. The exercise machine defined in Claim 13, wherein the angle between the generally vertical planes is between about 35 and 45 degrees.

15. The exercise machine defined in Claim 13, wherein the angle between the axes of rotation is between about 135 and 145 degrees.

16. The exercise machine defined in Claim 13, wherein the seat and frame are configured such that the elevation of the seat relative to the frame is adjustable.

17. The exercise machine defined in Claim 16, wherein the seat elevation is adjustable such that, when the user is seated and the user's upper arms or elbows engage the support pads, the user's elbows are angled upwardly from shoulder to elbow.

18. The exercise machine defined in Claim 16, wherein the user's elbows are angled upwardly from shoulder to elbow at an angle of at least 5 degrees.

19. The exercise machine defined in Claim 13, further comprising a backrest positioned rearwardly of and extending upwardly from the seat, the backrest defining a plane that forms an angle of between about 75 and 95 with an underlying surface.

5

20. The exercise machine defined in Claim 13, wherein each of the support pads is positioned so that each of the user's elbows is located on a respective axis of rotation.

10

21. The exercise machine defined in Claim 13, wherein the resistance system comprises a weight stack.

15

22. The exercise machine defined in Claim 21, wherein each movement arm unit comprises a cam that pivots about its respective axis of rotation, and wherein the resistance system includes a belt attached to and engaging each cam.

20

23. The exercise machine defined in Claim 13, wherein each movement arm unit comprises a lever arm attached to each cam and a handle that is pivotally interconnected to the lever arm and engages one of the forearm and hand of the user, the axis of rotation of the handle relative to the lever arm being substantially parallel to the axis of rotation of the cam relative to the frame.

25

24. An exercise machine for exercising the triceps muscles of a user, comprising:

30

a frame configured to rest on an underlying surface;
a seat mounted to the frame and configured to receive a seated user;
a pair of support pads mounted to the frame forwardly of and above the seat, each of the pads being positioned to engage the upper arms of the seated user;
a pair of movement arm units pivotally interconnected with the frame and movable about respective axes of rotation, each of the pair of movement arm units being configured to engage at least one of the forearms and the hands of the user, each of the pair of movement arm units being movable between a retracted position, in which the seated user's arms are bent, and an extended position, in which the user's

arms are extended, the axes of rotation forming an angle of between about 115 and 155 degrees;

a weight stack;

a first belt connected with the movement arms;

5 a second belt connected with the weight stack; and

a pulley bracket, the pulley bracket having a pair of upper pulleys that engage the first cable, the second cable being attached to the pulley bracket;

the weight stack, first and second belts, and pulley bracket being configured such that the weight stack resists movement of the movement arm units from the retracted position to the extended position.

25. The exercise machine defined in Claim 24, wherein the seat and frame are configured such that the elevation of the seat relative to the frame is adjustable.

15 26. The exercise machine defined in Claim 25, wherein the seat height is adjustable such that, when the user is seated and the user's upper arms or elbows engage the support pads, the user's elbows are angled upwardly from shoulder to elbow.

20 27. The exercise machine defined in Claim 26, wherein the user's elbows are angled upwardly from shoulder to elbow at an angle of at least 5 degrees.

28. The exercise machine defined in Claim 24, further comprising a backrest positioned rearwardly of and extending upwardly from the seat, the backrest defining a plane that forms an angle of between about 75 and 95 with an underlying surface.

29. The exercise machine defined in Claim 24, wherein each of the support pads is positioned so that each of the user's elbows is located on a respective axis of rotation.

30 30. The exercise machine defined in Claim 24, wherein the angle formed by the axes of rotation is between 135 and 145 degrees.

5

10

15

a pair of support pads mounted to the frame forwardly of and above the
the support pads being positioned to engage one of the upper arms and
the seated user;

20

25

30

34. The exercise machine defined in Claim 33, further comprising a backrest positioned rearwardly of and extending upwardly from the seat, the backrest defining a plane that forms an angle of between about 75 and 95 with the underlying surface.

5

35. The exercise machine defined in Claim 33, wherein each of the support pads is positioned so that each of the user's elbows is located on a respective axis of rotation.

10

36. The exercise machine defined in Claim 33, wherein the resistance system comprises a weight stack.

15

37. The exercise machine defined in Claim 36, wherein each movement arm unit comprises a cam that pivots about its respective axis of rotation, and wherein the resistance system includes a belt attached to and engaging each cam.

20

38. The exercise machine defined in Claim 37, wherein each movement arm unit comprises a lever arm attached to each cam and a handle that is pivotally interconnected to the lever arm and engages one of the forearm and hand of the user, the axis of rotation of the handle relative to the lever arm being substantially parallel to the axis of rotation of the cam relative to the frame.

25

39. A frame for an exercise machine for exercising the arm muscles of a user, comprising:

30

pairs of front and rear uprights rising from respective legs, each set of respective front and rear uprights and legs defining a generally vertical plane, the generally vertical planes defining an angle of between about 20 and 70 degrees; a seat mounted to the frame and configured to receive a seated user; and a pair of pads mounted to the frame forwardly of the seat, each of the pads being positioned to engage the upper arms of the seated user;

the frame adapted to receive a pair of movement arm units pivotally interconnected with the frame and movable about respective generally horizontal axes of rotation, each of the pair of movement arm units being configured to engage a portion of the arms or hands of the user, each of the pair of movement arm units being

movable between a retracted position, in which the seated user's arms are bent, and an extended position, in which the user's arms are extended.

5 40. The exercise machine defined in Claim 39, wherein the angle between
the generally vertical planes is between about 35 and 45 degrees.

10 41. The exercise machine defined in Claim 39, wherein the elevations of
the seat and the support pads are selected so that the upper arms of the user are angled
upwardly from the shoulder to the elbow when the user is in a seated position with his
arms engaging the support pads.

15 42. The exercise machine defined in Claim 41, wherein the upper arms of
the user extend upwardly from the shoulder to the elbow at an angle of at least 5
degrees.